REMARKS

Claims 1-32, 38-47, 52-57, and 66-87 are now pending in the application. Claims 33-37, 48-51, and 58-65 have been cancelled. Claims 1-12 and 20-32, 38-47, 52-57, and 66-73 have been withdrawn from consideration. Claims 74-87 are new. Minor amendments have been made to the specification to correct informalities. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

SPECIFICATION

Applicant has amended the specification in paragraphs [0103] and [0105] to correctly reference Fig. 4 instead of Fig. 4A and Fig. 9 instead of Fig. 4B.

REJECTION UNDER 35 U.S.C. § 102

Claims 13-19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Gstohl (U.S. Pat. No. 5,727,307). This rejection is respectfully traversed.

The invention as claimed in claim 13 is directed to an armature that has enhanced thermal conductivity than that provided by thermally conductive plastic molded around coils of the armature. To achieve this enhanced thermal conductivity, features that are pre-formed of a material having higher thermal conductivity than the thermally conductive plastic molded around the coils are insert molded on at least one of the end coils when the thermally conductive plastic is molded over the armature coils.

Applicants have amended claim 13 so that it now requires that the feature pre-formed of material that has a thermal conductively higher than the thermal conductivity

of the plastic molded around the coils that is insert molded on at least one of the end coils when the plastic is molded is disposed on an outer surface of the end coil. (Emphasis added) Applicants submit that Gstohl et al. fails to disclose such a pre-formed feature that is disposed on an outer surface of an end coil.

Gstohl et al. discloses an armature for an electric motor. The armature has a shaft with a lamination stack and a commutator thereon. The lamination stack has a plurality of slots in which magnet wires are wound, forming coils having end coils at opposed ends of the lamination stack. A plastic is molded around the coils including the end coils. The commutator is insert molded and made of copper.

The Examiner cites to Gstohl et als. commutator 5 as being the feature made of material higher than the thermal conductivity of the plastic molded around the coils that is inserted molded on at least one of the end coils when the plastic is molded. Applicants submit that Gstohl et als. commutator 5 is not insert molded on an end coil. As can be seen from Gstohl et als. drawings, Gstohl et als. commutator 5 is spaced from the end coil and only lead wires of the armature coils attach to commutator 5 at 12, as shown in Fig. 3 of Gstohl et al. Thus, Gstohl et als. commutator 5 cannot provide the enhanced heat transfer that a pre-formed feature insert molded on the end coil itself provides when that feature has a thermal conductivity higher than that of the thermally conductive plastic molded around the armature coils. To clarify this, applicants have amended claim 13 so that it now requires that this pre-formed feature be disposed on an outer surface of the end coil. Applicants submit that amended claim 13 is therefore allowable over Gstohl et al.

Claims 14 – 19 depend directly or indirectly from amended claim 13 are allowable for at least that reason.

NEW CLAIMS 74-87

Applicants have added new claims 74 – 87. New claims 74 and 81 are the independent claims. Claim 74 is directed to an electric motor having an armature comparable to the armature of amended claim 13. Claim 81 is directed to a power tool having an electric motor where the electric motor has an armature comparable to the armature of amended claim 13. Claims 74 and 81 contain limitations comparable to those discussed with respect to amended claim 13 and are allowable for at least that reason.

New claims 75 – 80 depend directly or indirectly from new independent claim 74 and new claims 82 – 87 depend directly or indirectly from new independent claim 81 and are allowable for at least that reason.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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